

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
5 April 2001 (05.04.2001)

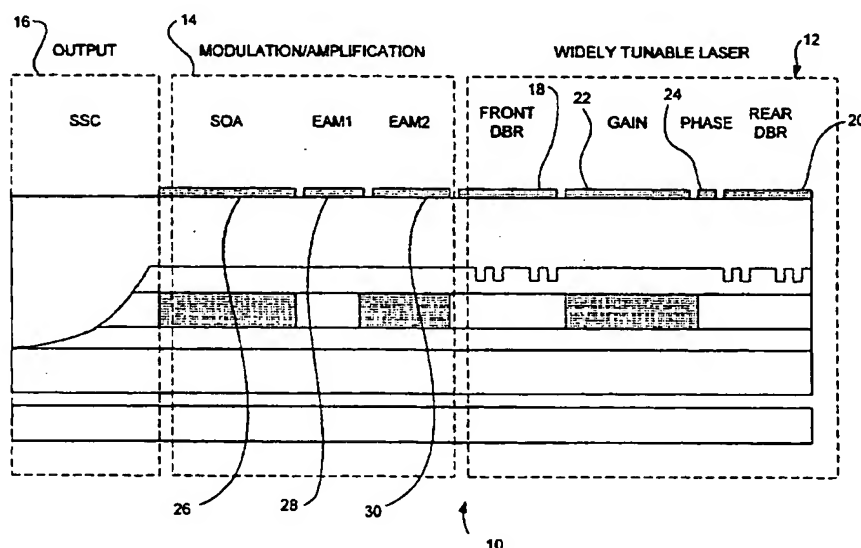
PCT

(10) International Publication Number
WO 01/24328 A3

(51) International Patent Classification ⁷ :	H01S 5/026	09/614,224	12 July 2000 (12.07.2000)	US
(21) International Application Number:	PCT/US00/22771	(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:		
(22) International Filing Date:	18 August 2000 (18.08.2000)	US	60/152,049 (CIP)	
(25) Filing Language:	English	Filed on	2 September 1999 (02.09.1999)	
(26) Publication Language:	English	US	60/152,038 (CIP)	
		Filed on	2 September 1999 (02.09.1999)	
		US	60/152,072 (CIP)	
		Filed on	2 September 1999 (02.09.1999)	
(30) Priority Data:		US	09/614,377 (CIP)	
60/152,049	2 September 1999 (02.09.1999)	US	Filed on	12 July 2000 (12.07.2000)
60/152,038	2 September 1999 (02.09.1999)	US	US	09/614,895 (CIP)
60/152,072	2 September 1999 (02.09.1999)	US	Filed on	12 July 2000 (12.07.2000)
09/614,377	12 July 2000 (12.07.2000)	US	US	09/614,674 (CIP)
09/614,895	12 July 2000 (12.07.2000)	US	Filed on	12 July 2000 (12.07.2000)
09/614,674	12 July 2000 (12.07.2000)	US	US	09/614,378 (CIP)
09/614,378	12 July 2000 (12.07.2000)	US	Filed on	12 July 2000 (12.07.2000)
09/614,376	12 July 2000 (12.07.2000)	US	US	09/614,376 (CIP)
09/614,195	12 July 2000 (12.07.2000)	US	Filed on	12 July 2000 (12.07.2000)
09/614,375	12 July 2000 (12.07.2000)	US	US	09/614,195 (CIP)
09/614,865	12 July 2000 (12.07.2000)	US	Filed on	12 July 2000 (12.07.2000)

[Continued on next page]

(54) Title: METHOD OF CONVERTING AN OPTICAL WAVELENGTH WITH AN OPTO-ELECTRONIC LASER WITH INTEGRATED MODULATOR



(57) Abstract: A method of converting an optical wavelength includes providing a wavelength converter assembly with a photodetector and a laser with a common epitaxial structure. The epitaxial structure has areas of differing bandgap. An optical input having a first wavelength at the wavelength converter assembly is absorbed. A first electrical signal is generated from the photodetector in response to the optical input. The first electrical signal is conditioned to produce a conditioned first electrical signal. A second electrical signal is generated from the conditioned first electrical signal. A laser output is generated from a gain medium of the laser at a second wavelength in response to the second electrical signal.



US 09/614,375 (CIP)
Filed on 12 July 2000 (12.07.2000)
US 09/614,865 (CIP)
Filed on 12 July 2000 (12.07.2000)
US 09/614,224 (CIP)
Filed on 12 July 2000 (12.07.2000)

DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(71) **Applicant** (*for all designated States except US*): **AGILITY COMMUNICATIONS, INC.** [US/US]; 600 Pinw Street, Second Floor, Santa Barbara, CA 93117 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants** (*for US only*): **FISH, Gregory** [US/US]; 4716 Frazier Lane, Santa Barbara, CA 93110 (US). **COLDREN, Larry** [US/US]; 4665 Via Vistosa, Santa Barbara, CA 93110 (US).

(74) **Agent**: **DAVIS, Paul**; Wilson Sonsini Goodrich & Rosati, 650 Page Mill Road, Palo Alto, CA 94304-1050 (US).

(81) **Designated States** (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,

(84) **Designated States** (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) **Date of publication of the international search report:**
25 October 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 00/22771

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01S5/026

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BAR-CHAIM N ET AL: "MONOLITHIC OPTOELECTRONIC INTEGRATION OF A GAALAS LASER, A FIELD EFFECT TRANSISTOR AND A PHOTODIODE" APPLIED PHYSICS LETTERS, US, AMERICAN INSTITUTE OF PHYSICS, NEW YORK, vol. 44, no. 10, 15 May 1984 (1984-05-15), pages 941-943, XP002016763 ISSN: 0003-6951 page 941, column 2, line 10 -page 942, column 2, line 2; figures 1,2 ---	1-4, 9, 19-24, 28, 32, 33
X	US 5 742 045 A (KIMMET JAMES S ET AL) 21 April 1998 (1998-04-21) the whole document --- -/--	1, 14, 15, 19-21, 32, 33

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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X document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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G document member of the same patent family

Date of the actual completion of the international search

9 May 2001

Date of mailing of the international search report

22/05/2001

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

Hervé, D

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/22771

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X	US 5 674 778 A (LEE KWYRO ET AL) 7 October 1997 (1997-10-07) column 2, line 36 -column 5, line 7; figure 1 ----	1,19
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Information on patent family members

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